BOTANICAL GAZETTE

The first number of the third volume of this journal, published by the New York Botanical Garden, contains colored plates and popular descriptions of Anonia atropurpurea (Eastern North America), Aster novaeangliae (United States and Canada), Gymnocalycium multiflorum and G. Mostii (Argentina), Euonymus alata (Eastern Asia), Diospyros virginiana (Eastern United States), Lepadena marginata (Central and Western United States), Maackia amurensis Buergeri (Japan), Hibiscus oculiroscus (Eastern United States), Cornus officinalis (Japan), Opuntia lasiacantha (Mexico).—J. M. C.

Morphology of wheat.—JENSEN<sup>10</sup> has investigated certain strains of wheat and the result is perhaps our fullest account of the morphology of this important plant. The subjects considered are development of spike and flower, of microspore and male gametophyte, of megaspore and female gemetophyte, fertilization and development of embryo, and endosperm. An interesting record is that fertilization occurred from 32 to 40 hours after pollination.—J. M. C.

Intrafascicular cambium in monocotyledons.—Mrs. ARBER<sup>11</sup> has added to her previous observations<sup>12</sup> of intrafascicular cambium in monocotyledons other observations which include Araceae, Dioscoreaceae, Iridaceae, and Potamogetonaceae. Such cambium is now known to occur in "all but two of the cohorts into which ENGLER divides the monocotyledons; the exceptions are the Triuridales and the Synanthae."—J. M. C.

Seed position and growth.—It has been found that bean seeds planted with the eye up give a somewhat lower degree of germination and growth than when the seed lies flat or is placed eye down.<sup>13</sup> This seems to show that the common practice of dropping seeds flat upon the soil when planting gives results that are satisfactory.—GEO. D. FULLER.

<sup>10</sup> JENSEN, G. H., Studies on the morphology of wheat. Bull. 150, State Coll. Washington. pp. 21. pls. 5. 1918.

<sup>11</sup> ARBER, AGNES, Further notes on intrafascicular cambium in monocotyledons. Ann. Botany 32:87-89. figs. 4. 1918.

12 BOT. GAZ. 64:350. 1917.

<sup>13</sup> HALSTED, B. D., and OWEN, E. J., Environment of seeds and crop production. Plant World 20: 294-297. 1917.